

CLAIMS

What is claimed is:

1. An electrophotographic apparatus for copying an image onto a sheet of a copy medium, said apparatus having a continuous loop of film for transferring said image to said sheet, a fuser section, and a travel path for transporting said sheet from said film to said fuser section, said travel path comprising:

5                   a vacuum transport for receiving said sheet from said film and moving said sheet towards said fuser; and

                  a fuser entrance guide for receiving said sheet from said vacuum transport and guiding said sheet into said fuser section, said guide comprising:

                  a housing adapted to maintain a vacuum therein; and

10                  a base plate on said housing; said base plate having a lower surface adapted to contacted by said sheet as said sheet moves between said film and fuser section, said lower surface having a first set of vacuum ports positioned near the edges thereof and a second set of vacuum ports positioned within a central area thereof.

2. The electrophotographic apparatus of claim 1 wherein the exits of some of said vacuum ports in said second set of vacuum ports are fluidly connected together.

3. The electrophotographic apparatus of claim 1 wherein said vacuum ports in said second set are arranged in rows which are spaced across said central area.

5                  4. The electrophotographic apparatus of claim 3 wherein the exits of all of said vacuum ports in each respective row are fluidly connected by a respective groove in said lower surface of said base plate.

5                  5. The electrophotographic apparatus of claim 1 wherein said lower surface of said base plate is curved between said film and said fuser section and wherein said central area in which said second set of vacuum ports are positioned is flattened.

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6. The electrophotographic apparatus of claim 5 wherein said vacuum ports in said second set are arranged in rows which are spaced across said flattened area.

7. The electrophotographic apparatus of claim 6 wherein the exits of all of said vacuum ports in a respective row are fluidly connected by a respective groove in said lower surface of said base plate.

- 5           8. A fuser entrance guide for an electrophotographic apparatus comprising:  
a housing adapted to be positioned between a continuous loop of film and the fuser section within said electrophotographic apparatus, said housing adapted to maintain a vacuum therein; and  
a base plate on said housing; said base plate having a lower surface adapted to be contacted by said sheet as said sheet moves between said film and fuser section, said lower surface having a first  
10 set of vacuum ports positioned near the edges thereof and a second set of vacuum ports positioned within a central area thereof.

9. The fuser entrance guide of claim 8 wherein the exits of some of said vacuum ports in said second set of vacuum ports are fluidly connected together.

10. The fuser entrance guide of claim 8 wherein said vacuum ports in said second set are arranged in rows, which are spaced across said central area.

11. The fuser entrance guide of claim 10 wherein the exits of all of said vacuum ports in a respective row are fluidly connected by a respective groove in said lower surface of said base plate.

12. The fuser entrance guide of claim 11 wherein said lower surface of said base plate is curved between said film and said fuser section and wherein said central area in which said second set of vacuum ports are positioned is flattened.

13. A base plate for a fuser entrance guide for an electrophotographic apparatus comprising:

- a plate adapted to be connected to a housing of a fuser entrance guide within said electrophotographic apparatus, said plate having a lower surface adapted to be contacted by a sheet of  
5 copy medium and having a first set of vacuum ports positioned near the edges thereof and a second set of vacuum ports positioned within a central area thereof.

14. The base plate of claim 13 wherein the exits of some of said vacuum ports in said second set of vacuum ports are fluidly connected together.

15. The base plate of claim 13 wherein said vacuum ports in said second set are arranged in rows which are spaced across said central area.

16. The base plate of claim 15 wherein the exits of all of said vacuum ports in a respective said row are fluidly connected by a respective groove in said lower surface of said base plate.

17. The base plate of claim 16 wherein said lower surface of said base plate is curved between said film and said fuser section and wherein said central area in which said second set of vacuum ports are positioned is flattened.

18. A method of guiding a sheet of a copy medium from a vacuum transport in electrophotographic apparatus into a fuser section of said apparatus, said method comprising:

providing a guide between the exit of said vacuum transport and the entrance of said fuser section; and

5       applying a vacuum at both the edges and the central area of the lower surface of said guide to attract and hold the edges and the center of said sheet against said lower surface as said sheet moves from said vacuum transport towards said fuser section.

19. The method of claim 18 including:

reducing the surface area of said lower surface of said guide between some of said vacuum ports to reduce drag forces on said sheet as said sheet moves across said lower surface.